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Other, description:

U.S. Patent 5,895,346

Doc Code: Artifact

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*Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

*Therefore, this*

United States Patent

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*If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.*

*If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.*

*J. Todd Ichni*

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US005895346A

**United States Patent** [19]

Wells et al.

[11] **Patent Number:** 5,895,346[45] **Date of Patent:** Apr. 20, 1999[54] **AUTOMATIC MULTIPLE-DECANTING CENTRIFUGE**[76] **Inventors:** John R. Wells, 4372 Keystone Ave., Culver City, Calif. 90232; Steven M. Gann, 2807 Oregon Ct., Suite E-1, Torrance, Calif. 90503[21] **Appl. No.:** 08/944,179[22] **Filed:** Oct. 6, 1997**Related U.S. Application Data**

[62] Division of application No. 08/435,662, May 5, 1995, Pat. No. 5,707,331.

[51] **Int. Cl.<sup>6</sup>** ..... B04B 5/02[52] **U.S. Cl.** ..... 494/37[58] **Field of Search** ..... 494/13, 14, 16, 494/17, 20, 32, 33, 35, 37, 85; 210/781, 782[56] **References Cited****U.S. PATENT DOCUMENTS**

3,190,546	6/1965	Raccuglia et al. .
3,420,437	1/1969	Blum et al. .
3,586,848	6/1971	Anderson .
3,712,535	1/1973	Genese et al. .
3,722,789	3/1973	Kennedy .
3,851,817	12/1974	Buck .
3,877,634	4/1975	Rohde et al. .

3,951,334	4/1976	Fleming et al. .	
3,953,172	4/1976	Shapiro et al. .	
4,066,407	1/1978	Lupica .	
4,285,463	8/1981	Intengan .	
4,431,423	2/1984	Weyant, Jr. .	
4,714,457	12/1987	Alterbaum .	
5,045,047	9/1991	Hutchins et al. .	
5,047,004	9/1991	Wells .	
5,178,602	1/1993	Wells .	
5,199,937	4/1993	Wada et al. ....	494/20
5,209,776	5/1993	Bass et al. .	
5,292,362	3/1994	Bass et al. .	
5,318,524	6/1994	Morse et al. .	

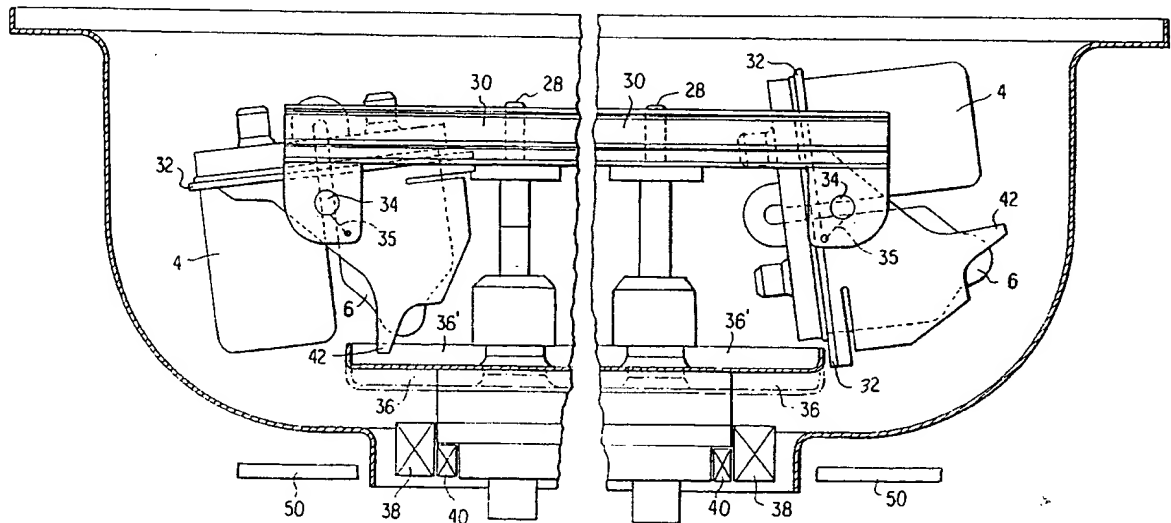
**FOREIGN PATENT DOCUMENTS**

43 23 844 A1 7/1993 Germany .

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*Attorney, Agent, or Firm*—Dickinson Wright PLLC

[57] **ABSTRACT**

A centrifuge is capable of holding a sample container in selected orientations, either during or after centrifugation, to drain supernatants between two or more chambers of the container. The draining may be gravity or centrifugal draining. This allows an automated process to subject a sample to a first physical or chemical treatment to produce a first supernatant, the first supernatant to be subjected to a second physical or chemical treatment, and a second supernatant to be separated from a desired component.

**31 Claims, 3 Drawing Sheets**

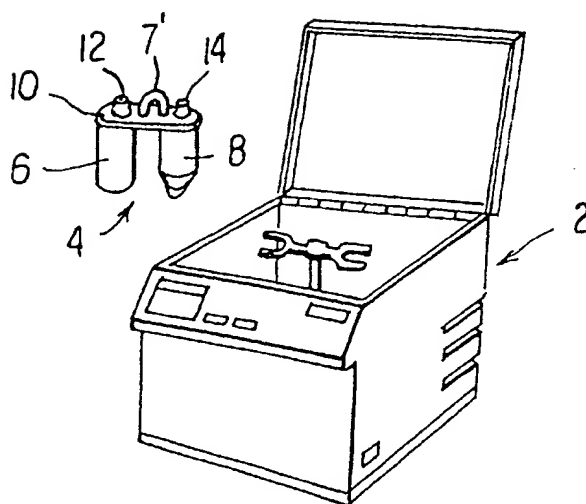


FIG. 1

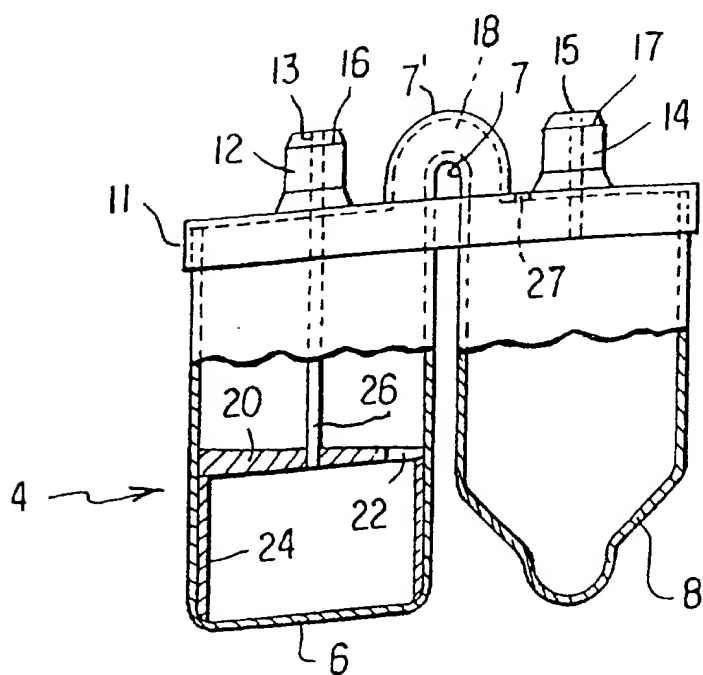


FIG. 2